



ENGINEERING SPECIALISTS INC.

Providing Technical Engineering Services Worldwide Since 1974



KNOWLEDGE & EXPERIENCE YOU CAN TRUST

Input Shaft Assembly Machine

Situation:

An internationally known manufacturer of Recreation Vehicles came to Engineering Specialists (ES), and asked if ES would develop a new test/assembly press for an input shaft. The assembly had several components that needed to be assembled in a specific order. The assembly system/press needed to press the assembly together at a preset force and force range, and check that the force required to assemble was not too high. An inspection of all the components, looking for orientation and placement of the components was initiated prior to final assembly. After pressing all components, a quality check was initiated to insure proper depth of the snap ring and to check the snap ring gap after installation.

Solution:

ES designed and built the system that provided for the ability to check the placement of, and the orientation of the components, using a Cognex high-resolution camera system and Smart Vision Lighting components. Pick sensors were also used to aid the operator and avoid rework due to improper placement. The pressing was handled using a Promess Press and it was all controlled with a CompactLogix 5370 processor and PaneView + 700 HMI. All the controller equipment was housed in standard Hoffman enclosure that was mounted onto a custom fabricated base/press frame. Custom tooling and guarding were also provided. Cycle time was significantly improved with the new system.

Objectives and Results:

The objective of the project was achieved as the system was able to increase the production rates and quality over similar systems designed by previous resources, and achieve zero defects of all finished assemblies produced by the system.

The finished system was fully run-off at Engineering Specialists and resulted in meeting the customer's cycle times and completely meeting their expectations.





Our History

**A REGISTERED PROFESSIONAL
ENGINEERING FIRM**

UL508 Certified (NNNY, NRBX, NITW)



Engineering Specialists, Inc. was founded by Robert Miller, a graduate of Marquette University's Electrical Engineering Program and Robert Phillips, a graduate of MATC.

The two close friends in need of a change had thought about consulting, but instead began building and designing the sophisticated equipment used by many of the most competitive businesses in the market today. Bob Miller recalls filing the very first customer file in his cabinet wondering if he would ever fill it. That was over 40 years, 1400 customers, and 20,000 projects ago!

With the technological challenges that all businesses experience, sometimes on a daily basis, Engineering Specialists has managed to evolve with the times to keep its customers in motion and ahead of their competition.

Contact Engineering Specialists today and find out how our skilled engineers and technicians can provide your unique business with the tools it needs moving forward successfully into the future.

3 Convenient Locations

CORPORATE OFFICE

21360 Gateway Court
Brookfield, WI 53045
Phone: (262) 783-8000
Fax: (262) 783-8001

NEENAH OFFICE

2416 Industrial Drive
Neenah, Wisconsin 54956
Phone: (920) 751-3900

RACINE OFFICE

1139 Sunnyslope Drive
Mount Pleasant, WI 53406
Phone: (262) 783-8000
Fax: (262) 783-8001

Partners